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AUTHOR Bishop, Alan J., Ed.; And Others
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ABSTRACT

This book presents issues concerning relationships between mathematical knowledge and the teaching and learning processes, focusing especially on the genesis of mathematical knowledge in the classroom. The chapter titles are: (1) The Fragility of Knowledge (Guy Brousseau and Michael Otte); (2) The Double Bind as a Didactical Trap (Stieg Mellin-Olsen); (3) Forms and Means of Generalization in Mathematics (W. Dorfler); (4) Metaphors Mediating the Teaching and Understanding of Mathematics (Joop van Dormolen); (5) Tool, Object, Setting, Window: Elements for Analyzing and Constructing Didactical Situations in Mathematics (Regine Douady); (6) Observing Conceptual Complexity (Tage Werner); (7) Developing Mathematical Knowledge through Microworlds (Celia Hoyles); (8) The Benefits and Limits of Social Interaction: The Case of Mathematical Proof (N. Balacheff); and (9) Mathematical Values in the Teaching Process (Alan Bishop). (MKR)

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